



**Supplemental Figure 2. Localized inhibition of CtsK alleviated the damage of cartilage induced by CIA. (A)** Representative safranin-o stained knee joint sections. The black arrow indicates cartilage. **(B)** OARSI score of knee joints in different groups. Control: untreated DBA/J1 mice; *P.g*: mice orally infected with *Porphyromonas gingivalis*; CIA: mice with collagen-induced arthritis (CIA); GFP: mice received empty AAV vectors (AAV-U6-CAG-EGFP); CtsK: mice received AAV-U6-Ctsk-shRNA-CAG-EGFP. Data are presented as the mean  $\pm$  SD. Data are presented as the mean  $\pm$  SD. Statistics in “B” was determined by Kruskal Wallis test and Mann-Whitney U exact test. The asterisk (with no line connection) on the column of this group represents the statistical difference between it and the control group.  $**p < 0.01$ ,  $***p < 0.001$ . Experiments were repeated three times.